I claim:

1. A tooth-bleaching composition for contacting a tooth surface in a subject, the composition comprising:

a first formulation having a hydrogen peroxide-containing compound; and

a separate second formulation having a thickening agent, a pH adjusting agent, and less than 0.5% by weight, based on the weight of the composition, of a calcium chelating agent;

wherein the first and second formulations remain separate and are mixed with one another, prior to use, to form the composition.

2. A tooth-bleaching composition according to claim 1, wherein the hydrogen peroxide-containing compound is a percarbonate salt.

3. A tooth-bleaching composition according to claim 2, wherein the percarbonate salt is selected from the group consisting of sodium and potassium percarbonate.

4. A tooth-bleaching composition according to claim 1, wherein the hydrogen peroxide-containing compound is hydrogen peroxide.

5. A tooth-bleaching composition according to claim 4, wherein the concentration of hydrogen peroxide in the composition is less than 15% by weight of the composition.

6. A tooth-bleaching composition according to claim 1, wherein the composition has a pH in a range of from about 6.0 to about 10.0.

7. A tooth-bleaching composition according to claim 6, wherein the

composition has a pH in a range of from about 8.0 to about 9.5.

8. A tooth-bleaching composition according to claim 1, wherein the calcium chelating agent is selected from the group consisting of EDTA and its salts, citric acid and its salts, gluconic acid and its salts, alkali metal pyrophosphates and alkali metal polyphosphates.

9. A tooth-bleaching composition according to claim 8, wherein the calcium chelating agent further acts as a stabilizing agent for the peroxide-containing compound.

10. A tooth-bleaching composition according to claim 1, wherein wherein the calcium chelating agent is 1-hydroxyethylidene-1,1-diphosphonic acid.

11. A tooth-bleaching composition according to claim 1, wherein the composition is capable of a detectable tooth-bleaching effect within 30 minutes.

12. A tooth-bleaching composition according to claim 1, wherein each of the first and second formulations are formulated for storage within a chamber of a multi-chamber vessel, such that in the presence of an externally applied pressure, each of the formulations is forced to exit its respective chamber through a mixing baffle to form the composition.